**IT Applications Unit 3, AOS 2, Organisations and Data Management**

**Database Design Tools, p 106**

**Naming Conventions**

1. **List the naming conventions that can be applied to a database.**

* Table: tbl
* Customer: cus
* Queries: qry
* Forms: frm
* Reports: rpt

**Entity-Relationship Diagram, (ERD)**

1. **Describe the nature of these diagrams.**

AN Entity-Relationship Diagram, (ERD), is used by database designers to establish the interrelationships between different data elements (field). It shows the subparts of the tables and how the entities relate to each other. They use a simple set of symbols, like flow charts. In an ERD, entities (tables) are the things about which information is sought (Books and films) and attributes are the elements of the data that we collect about the entities (title and author of the book).

1. **Draw the symbols used to represent, entities, relationships and attributes.**

Ovals represent attributes (fields)

Diamonds represent relationships.

Boxes represent entities (tables).

1. **List the three steps to create an ERD.**

To create the ERD, you need to firstly identify the entities (tables) and then establish the relationships between these entities (tables) and then define the attributes (fields) of each entity (table).

**Data Structure Table**

1. **Draw a diagram of the data structure table which is used to design a new database.**

**Note: database tables cannot hold formulas.**

**Data Structure diagram**

1. **What is the purpose of this diagram?**

The purpose of a data structure diagram is to indicate the relationships that exist between the specific tables of the planned database so that the developer will know how the tables have to be linked. It is also important to indicate the type of relationship.

**Query Design**

1. **What is a query?**

Queries are used in databases to filter out only those records that meet the query criteria.

1. **Distinguish between a primary and a secondary sort**

The left most field in the query design view that is assigned a sort specification is the primary sort key. The field next most left is the secondary sort key and so on. The fields can be dragged to the different positions to chage the sort order.

**Read the query criteria that can be used, including symbols, plain text, \*? Wildcards, etc.**

**Layout diagram**

1. **What does a layout diagram involve?**

The layout diagram involves sketching what an input form or the output (report) of the solution will look like.

1. **List what is contained on a layout diagram.**

It shows an interface developer the location of elements such as headings, labels and fields. This layout is based on appropriate use of formats and conventions. It shows annotations on the font type, size and style and options for selection lists.

**Test Data**

1. **When is a set of test data prepared?**

A set of test data is prepared in the design stage.

1. **What is the role of the test data?**

The test data will be used during the development stage to ensure that the solution is functioning correctly. The test data should include all parts of the solution.

**Validating data**

1. **List the available electronic validation checks in the software.**

* Range check
* IF statements
* Drop down boxes
* Max and min characters
* Spell checks
* Data type checks
* Input masks
* Alignment
* Grammar checking

1. **What is an input mask?**

An input mask is used to control how data is entered. It can be set up to accept a specified number of digits, dates or characters in a commonly accepted format.